

Notice of Allowability

Application No.

10/664,211

Examiner

Walter L. Lindsay, Jr.

Applicant(s)

VERMA ET AL.

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Election filed 9/16/2004.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 17 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 12/23/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

This Office action is in response to the Election requirement filed 9/16/2004.

Currently, claims 1-22 are pending. Claims 17-22 have been withdrawn.

Election/Restrictions

1. Applicant's election without traverse of claims 1-16 in the reply filed on 9/16/2004 is acknowledged.
2. Claims 17-22 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected device, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/16/2004.
3. This application is in condition for allowance except for the presence of claims 17-22 to a device that is non-elected without traverse. Accordingly, claims 17-22 have been cancelled.

Allowable Subject Matter

4. Claims 1-16 are allowed.
5. The following is an examiner's statement of reasons for allowance: the prior art, either singly or in combination fails to anticipate or render obvious, the limitations of:
 - ...planarizing said first dielectric layer and recessing said first dielectric layer below the level of said gate structure;
 - forming a second dielectric etch stop layer over said first dielectric layer;
 - planarizing said second dielectric layer in level with the gate structure;
 - pattern said second dielectric layer, using oversize gate mask to leave said second dielectric layer around said gate structure; and

forming electrical gate contact steps comprising: forming an inter-level dielectric layer over partially formed MOSFET device; patterning contact holes to source drain regions, patterning contact hole to gate stopping on said second dielectric layer; forming planarized metal patterns in and over said contact holes, as required by claim 1; and

planarizing said silicon dioxide layer and recessing said silicon dioxide layer below the level of said poly-silicon gate structure;

forming a silicon nitride etch stop layer over said silicon dioxide layer;

planarizing said silicon nitride etch stop layer, using oversize poly-silicon gate mask to leave said silicon nitride layer around said poly-silicon gate structure; and

forming electrical poly-silicon gate contact steps comprising: forming an inter-level dielectric layer over partially formed MOSFET device; patterning contact holes to source drain regions, patterning contact hole to poly-silicon gate stopping on said silicon nitride etch stop layer; forming planarized metal patterns in and over said contact holes, as required by claim 11.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

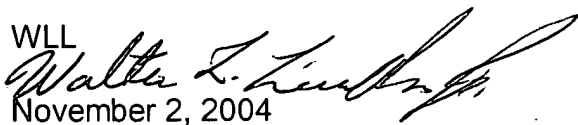
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter L. Lindsay, Jr. whose telephone number is (571) 272-1674. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John F Niebling can be reached on (571) 272-1679. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WLL

November 2, 2004



John F. Niebling
Supervisory Patent Examiner
Technology Center 2800